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Libby Asbestos Superfund Site

Messages for Troy

EPA wants people in Libby and Troy to feel and understand that:

- We are fair
- We can be trusted
- We care about people's health.
- Our cleanup is very protective
- We are using state-of-the-art science on this cleanup
- We are working hard to get a very complex cleanup done quickly
- We support economic development
- We are doing our best to balance things without overreacting

For them to believe these things, they have to feel satisfied not only with what MDEQ & EPA are doing for them, but how we are going about it - the process as well as the substance.

Process Messages

Superfund

- EPA can't do everything it wants. The Agency operates under legal authority that comes from Superfund Law.
- On October 24, 2002, the Libby Asbestos Site became a National Priorities List (NPL) site making it eligible to receive additional federal funds for a long-term remedial cleanup.
- EPA is cleaning up Libby as efficiently as is possible. To date, the cleanup has been conducted under "removal" authority but EPA is moving toward cleanup under "remedial" authority.
- Superfund allows two types of cleanup:
 - (1) Removal (*Action Memo* authorizing immediate cleanup that is time sensitive; usually 1 year and \$2 million)
 - (2) Remedial (investigative studies leading to a *Record of Decision* before cleanup; usually longer costly cleanups)
- The EPA is only authorized to do the work that is approved in the Action Memo or Record of Decision.
- The first Action Memo was issued in 2000 under emergency response or removal authority. The Record of Decision will be issued after the Proposed Plan, probably in spring 2006.

- EPA uses its current funding for residential and commercial cleanup and conducts necessary investigations such as the Contaminant Screening Study (CSS) and the Risk Assessment that will lead to a Record of Decision (ROD).
- EPA is using remedial authority and funding for investigations such as the Contaminant Screening Study (CSS), which provides much of the data for the Remedial Investigation (RI).
- The rationale in the Action Memo authorizing removal of vermiculite from attics is:
 - (1) trade worker exposures in attics, not exposures in homes with vermiculite, and
 - (2) presence of multiple exposure pathways.
- The cleanup rationale in the Record of Decision may look different but the goal is the same – protecting public health.
- EPA believes the remaining risk is significant, and that is why it is spending about \$20M per year to address it. The program we have in place is designed to remove the most accessible remaining source materials and most significant exposures - as quickly and thoroughly as we can while operating under removal authority.

Community Involvement

- EPA wants people to understand what we're doing and why. We want to hear from people about their positive or negative experiences as well as constructive suggestions about how to improve our process.
- For five-and-a half years EPA has looked for ways to both share information and provide opportunities for the public to be involved in the cleanup decision-making process.
 - EPA Information Center in Libby & MDEQ Project Office in Troy
 - Community Advisory Group
 - Q&As and Columns in newspapers
 - Technical Assistance Grant
 - Fact Sheets, flyers, posters
 - Radio
 - Health Fairs
 - Public events (meetings, conferences, workshops)
- EPA is trying to educate the public about the Superfund process and their opportunities for participation.
- After ranking and comparing cleanup options to each other, EPA will formally propose a cleanup plan. There will be a public comment period on the Proposed Plan of at least 30 days or more. There will also be a formal meeting to describe the plan and record public comments.

- If public comment reveals new information or convincing arguments that prompt EPA change the preferred cleanup plan, EPA will issue a new Proposed Plan.

Technical Messages

Health and Safety

- The Health and Safety of our workers and the community is critical to EPA & MDEQ. It is our #1 concern.
- We use protective safeguards in every part of the cleanup process from sampling and analysis, to cleanup to decontamination procedures.
- On a project this big there are going to be some hiccups along the way. EPA encourages anyone to bring Health and Safety issues to our attention and we move immediately to identify, correct and prevent the problem in the future.
- EPA works closely with the Technical Assistance Group and others. We take every suggestion for improvement seriously.

Risk Assessments

- There aren't widely accepted risk models for Libby Asbestos, but that doesn't eliminate the requirement to conduct and use a risk assessment.
- The nature of risk assessments in general is that they are uncertain. They don't provide any certain safe numbers.
- Because the numbers are uncertain, there is a margin of error built into the process up front to make it more protective.
- The process of risk assessment is: how often you're exposed and for how long (exposure frequency and duration) X the asbestos concentration X the toxicity of the asbestos.

Analytical Methods

- EPA is very involved with nationally respected scientists and professionals. We are on the cutting edge in terms of research and response.
- EPA is as good at measuring asbestos in soils as is possible right now. There are benefits and drawbacks to any method. We are still using TEM for air and dust.
- PLM-VE is the best analytical method for soils that we have right now, and critical to what we are doing. It is a substantial improvement over PLM.

- Soil samples are analyzed by our most sensitive testing methods - some of them developed just for Libby. We can detect very low levels of asbestos.
- Other factors at Libby such as experienced analysts and continuity make our measurement system as good as it can be right now.
- EPA's Performance Evaluation study tests unproven and new methods for measuring asbestos in Libby soil. It is cutting edge and specially tailored for Libby soil.

Overall Cleanup

- A large team performs tasks off-site that are vital to successful work on-site (planning, database, procurement, design, risk assessment, science, records management, etc).
- The team uses safeguards to make the process very protective - some are not obvious and are very progressive. Some examples:
 - *not sampling VCI*: the majority of insulation samples taken had some level of asbestos present. Rather than sampling, EPA now assumes all VCI is contaminated and removes all VCI from accessible areas such as attics.
 - *grinding soil samples*: creates a homogeneous sample and allows for more accurate analysis
 - *counting very small fibers*: EPA includes the smallest fibers in our analysis of air and dust samples and uses the information to make our risk assessment more accurate
 - *considering Berman/Crump*: a new risk model that takes mineral type (amphibole vs. chrysotile) and fiber size into account.
 - *cleaning up everything we can detect in yard areas*: a protective approach that ensures we will not have to go back to properties we have already cleaned if a lower action level is adopted in the ROD.
 - *cleaning up all visible vermiculite in heavy use areas without sampling*: again, a more protective approach until PE study and risk assessment are completed and final action levels are established.
 - *HEPA vacuums*: with frequent use, HEPA vacs aid in minimizing exposures to interior contamination and limit the chances of recontamination at homes that have been cleaned up.
 - *Air, dust and soil samples are not averaged*: typical risk assessment practice calls for cleanup actions to be contingent on the average concentration in a home, yard, or other area. In Libby, EPA generally uses the results of individual samples – if any one sample exceeds the action level then that entire area is cleaned up, even if the average concentration in that area is less than the action level. This makes the cleanup more protective.
- EPA usually leaves vermiculite insulation in inaccessible areas such as walls or, outside, under concrete or another permanent structure because chance of exposure is relatively low.

- Clearance sampling is conducted after every cleanup to ensure that asbestos is not detected.
- EPA will continue to test the effectiveness of the cleanup by taking samples several months later in homes that have been cleaned up. To date the results of this post-cleanup sampling are very encouraging.
- Our basic approach to measuring success is two fold.
 - (1) conduct reasonably conservative clearance sampling, and
 - (2) revisit cleaned areas and measure actual exposure.

Past Assumptions in Libby and Troy:

- *Assumption:* Vermiculite insulation is being removed because it contaminates the dust in the interiors of homes. *Actual:* While vermiculite insulation in attics and walls *can* contaminate indoor dust if it leaks out over time or is released in large quantities, the reason for cleanup is mostly based on the risk VCI causes tradesmen and residents entering and working in attics.
- *Assumption:* Visible vermiculite in soil always indicates high levels of asbestos. *Actual:* Visible vermiculite is often a good indicator that asbestos is present, but not necessarily at high levels. Many areas with visible vermiculite, especially when the amount of vermiculite is small, have no measurable asbestos at all. We clean up most areas with high levels of visible vermiculite.
- *Assumption:* There is no safe level of asbestos. Everything should be cleaned. *Actual:* In theory, there is no level of *any* cancer causing agent below which one can say there is absolutely *no* chance of disease. Asbestos is no different. However, the amount of risk is dependent on the amount of exposure and other factors – very low exposure equates to very low risk.
- *Assumption:* TEM is *always* the best method for analyzing asbestos samples. *Actual:* TEM is not the best method for analyzing soils – PLM-VE has been proven to be just as effective, if not more, and is far cheaper. TEM is expensive – at times there are cheaper methods that can do the job

Financial and Technical Constraints

- There is no scientific or legal justification or authority that allows EPA to remove all the vermiculite in Troy or Libby - our actions have to meet criteria set forth in Superfund law and be clearly justified by data.
- EPA must use the technology that is available (and approved) at the time, and acknowledges that there are uncertainties and limitations to what we know. New technologies for detecting Libby Asbestos may become available in the future.
- Risk assessment is required by law although there is a lack of widely accepted risk models

for asbestos.

- EPA will have to legally defend its actions in the future and cannot act unilaterally, without using accepted scientific and legal standards and procedures.

Risk Management

- The cleanup is a good balance of many competing factors. While not perfect, it is very protective. EPA & MDEQ are always willing to improve our processes and outcomes.
- Highest known risk in Libby has been mitigated. This includes major source areas located at facilities associated with the mine (the screening and export plants) and several Libby schools. The risk presented by the remaining small scale sources is low (although still present hazards if exposures occur over a long period of time) relative to the large sources already removed.
- The disease seen today is largely from conditions and sources that are no longer present (mine operations, mine take home dust, ambient air, screening plant, export plant, ball fields, schools, carelessness with vermiculite, etc.) However, having evidence of some non-occupational health effects, EPA & MDEQ are committed to reducing risk.
- Asbestos, including Libby Asbestos, is a fact of life across the country and in Troy and Libby. Some exposures will not be stopped by EPA, and some costs will fall to the residents. EPA is looking for ways to offset that.

Key Issues and Tradeoffs

- Far more money has been and will be spent on cleaning up major sources, such as vermiculite processing and handling areas (screening plant, export plant, railroad, mine) than has been or will be spent on individual homes. This decision is based on risk and the relative sizes of homes versus large properties.
- Each home or business EPA cleans up is different and the procedures and cost will differ slightly, but the goal and the result should be the same - a protective cleanup.

Beneficial and Harmful Impacts (Need to be communicated up front)

- Beneficial impacts *may* include:
 - attics cleaned and reinsulated
 - yards cleaned and resodded or seeded
 - gardens and flowerbeds excavated and backfilled
 - health is protected
 - peace of mind
 - property may be easier to sell
 - property may be worth more
 - yards in poor condition may be improved

- advisement about potential location of vermiculite
- community gets clean bill of health
- cleanup provides many local jobs
- a lot of money is coming in to Libby to local businesses
- Harmful effects may include:
 - incidental damage to home during cleanup
 - incidental damage to yard during cleanup
 - intrusion into people's personal lives
 - inconvenience of relocation
 - schedule changes
 - loss of business revenue during cleanup
 - negative media coverage
 - some local jobs may not be steady or may involve some flexibility

EPA & MDEQ Goals

EPA Goals in Libby include:

- conducting as thorough of an investigation as is possible
- protecting public health and the environment through cleanup of Libby asbestos
- boosting to the economy through local hiring for cleanup and related work
- providing timely and accurate information to the public
- encouraging public participation in the decision-making process
- promoting reuse of formerly contaminated industrial areas
- supporting economic redevelopment in Troy & Libby and surrounding area
- completing a comprehensive cleanup and deleting Troy & Libby from the Superfund list

EPA History / Site Background

- President Richard Nixon created EPA in 1970 to protect the environment and public health.
- Congress created Superfund in 1980 to clean up hazardous waste sites and hold polluters responsible.
- Superfund was initially funded with a trust fund created by a special tax on oil and chemical industries. The tax expired in 1996 and not been reauthorized. Superfund now depends on general appropriations (tax payer money) from Congress to do its work except in those cases where a responsible party pays for cleanup.
- EPA Region 8 began investigation and cleanup under emergency response authority in November 1999 because of reports of widespread death and illness due to asbestos exposure.
- Approximately \$110 Million has been spent on investigation and cleanup to date.